U.S. Pollen Observations
API User Document
Version 1.0

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Audience
This API is intended for web and mobile platforms.

Geography
U.S.A. Only

Background Technology
This API is a REST-based web service.

Response Format
This TWC API can return either JSON or XML formatted responses.

Icon Codes, Weather Phrases and Images
For the mapping of icon codes, weather phrases and images please refer to the Icon Code, Weather Phrases and Images document.

Translations
This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

Fields Translated

- Tree names
- Station Comments
- Pollen Type
- Pollen Description

HTTP Headers and Data Lifetime - Caching and Expiration
For details on appropriate header values as well as caching and expiration definitions, please see **The Weather Company Data | API Common Usage Guide**.

Expiration
The response provides a data element expire_time_gmt. The value in this data element should be used to expire and remove a record from your system.

URL Construction
Please refer to the TWC API Common Usage document for a tutorial on URL construction and URL references.

Overview

The current US pollen observation content for a valid TWC location in the supported region or latitude/longitude. The US Pollen Observation returns the pollen observation content for a valid TWC located in the supported region or latitude/longitude coordinate. The API will return the index and index description for three pollen types (tree, weed, grass) and for mold. The API supports two languages – English and Spanish for the US.

Understanding U.S. Pollen Observations

Implementing the US Pollen Observations API requires your applications to perform basic processing in order to properly ingest this data.

U.S. Pollen Observations Composition

Pollen data provided through this API is sourced from trusted third-party organization that collects data from allergist's offices on weekdays, Monday – Friday, except holidays. There are four segments of the data feed. The first contains the metadata, which includes the specified language parameter in the request URL. The US Pollen Observation content is presented in either English by default or translated into Spanish when the Spanish language parameter is used. The remaining data segments contain information on the location, reporting date/time and station, the specific tree species, and index for tree pollen, grass pollen, weed pollen, or mold count.

URL Format

Atomic API URL Examples: Your content licensing agreement with TWC determines the number of days returned in the API response and is constrained by the API Key that is provided to your company.	
Request by Geocode (Latitude & Longitude): https://api.weather.com/v1/**geocode/34.063/-84.217**/observations/pollen.**<json or xml>?language=en-US**&**apiKey=yourApiKey**	**Required Parameters:** geocode, language, format
https://api.weather.com/v1/geocode/34.063/-84.217/**observations/pollen**.json?language=en-US&apiKey=yourApiKey	
Request by Postal Code: The Postal Code has a TWC proprietary location type (4) with the following format: location/<postal code>:<location type>:<country code> https://api.weather.com/v1/**location/30075:4:US**/observations/pollen.**<json or xml>?language=en-US**&**apiKey=yourApiKey**	**Required Parameters:** postal code:4:country code, language, format
https://api.weather.com/v1/location/30075:4:US/**observations/pollen**.json?language=en-US&apiKey=yourApiKey	

Data Elements

Data Element Rule Definitions

Each data element has three rules associated with it as defined below.

This Rule …	… does this …	… and answers this …
Usage Rule	Determines whether a data element is required or optional. If it is optional, determines whether or not you can substitute it with a different data element.	Must I use this data element or can I replace it with a different one?
Processing Rule	Defines how to process a data element so the results are correct.	If I use this data element, how do I process it?
Display Rule	Defines the proper display format for a data element.	How do I display this data element?

Data Element Descriptions

Outbound JSON/XML	Description	Type	Length	Range	Null	Sample	Usage	Processing	Display
Metadata									
version	API version number	String	4		N	1	required	none	do not display
transaction_id	Generated transaction id for the API call	String	varies		N	7506556217027201134	required	none	do not display
expire_time_gmt	Data expiration date/ time in UNIX seconds	Long	10	unlimited	N	1373914800	required	none	do not display
US Pollen Observations									
class	type of data	String	12	pollenobs	N	pollenobs	required	none	do not display
loc_id	pollen station id	String	3	any valid pollen station	N	ATL	required	none	do not display
loc_nm	city name	String	45		N	Atlanta	required	none	display as provided
loc_st	state	String	2		N	GA	required	none	display as provided
rpt_dt	the date and time the pollen observation was reported	Date	24	YYYY-MM-DD'T'HH:MM:SSZ	N	2014-04-08T15:00:00Z	required	none	do not display
process_time_gmt	processed date/time in UNIX seconds	Long	10	unlimited	N	1367892140	required	none	do not display
Tree Name – occurs 3 times									
tree_nm	the name of the tree species with the highest observed pollen count	String	10	see Tree Names	N	Cedar	optional	none	display as provided

total_pollen_cnt	the total observed pollen count of the specified plants being measured at the location	Integer	5	grains per cubic meter	Y	551 grains per cubic meter	optional	none	display as provided
stn_cmnt_cd	the pollen station comment code	String	1	A - No Report B - Equipment Failure C - Reports only during weed pollen season D - Reports Suspended E - Rain/Inclement Weather F - Does not report year round G - Report valid more than one day H- Operating Normally	Y	H	optional	none	do not display
stn_cmnt	the reporting status of the pollen stati	String	50	see Station Comments	Y	operating normally	optional	none	display as provided
Pollen Observation – Occurs 4 times – Tree, Grass, Weed and Mold									
pollen_type	type of pollen	String	16	see Pollen Types	N	Tree	required	none	display as provided
pollen_idx	pollen index value	String	1	0 to 4 or 9	N	1	required	none	display as provided
pollen_desc	pollen index description	String	12	see Pollen Index Descriptions	N	1	required	none	display as provided

Response Field Maintenance

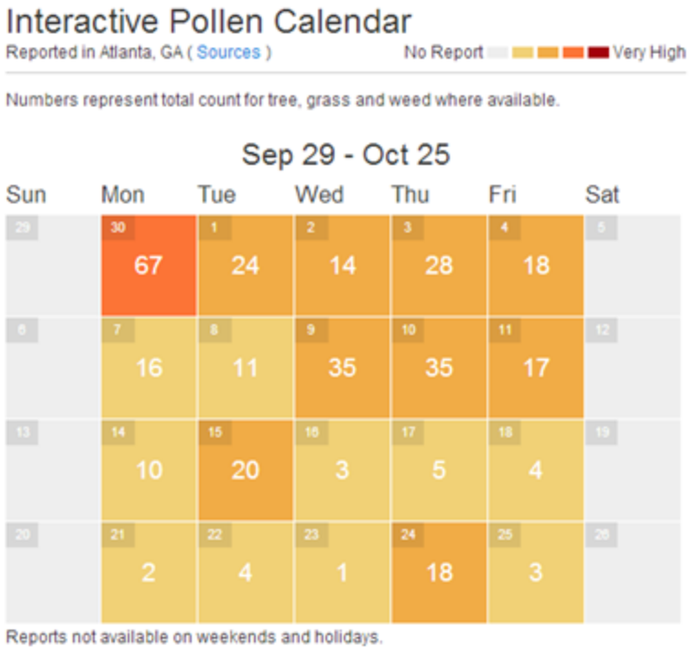
TWC strives to minimize the impact of changes in our weather content to your applications. TWC will not remove, rename or change the data type (int, string) of any data fields in the API response. However, TWC may add new data fields without notice.

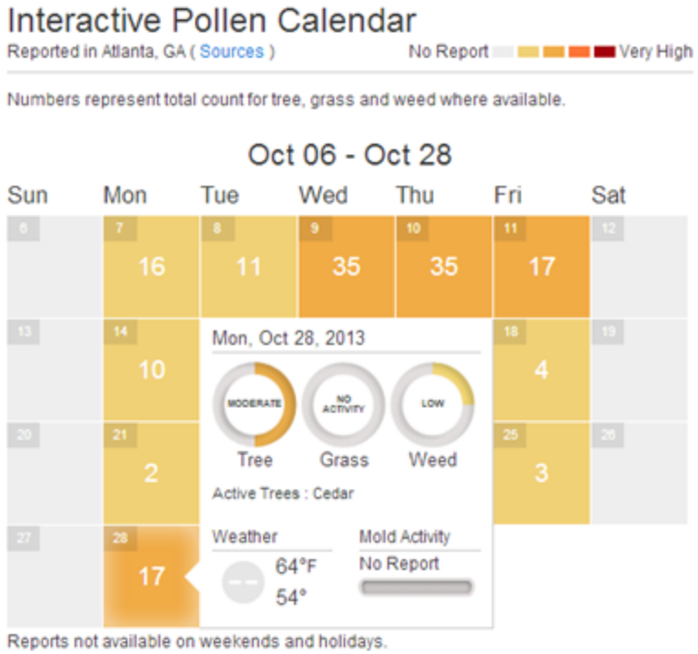
Formatted Response Samples

Extensible Markup Language (XML) Example	JavaScript Object Notation (JSON) Example
<response> <script id="script_privacy"/> <metadata> <version>1</version> <transaction_id>3024609351603579883</transaction_id> <expire_time_gmt>1397271306</expire_time_gmt> </metadata> <pollenobservations> <class>pollenobs</class> <loc_id>ATL</loc_id> <loc_nm>Atlanta</loc_nm> <loc_st>GA</loc_st> <rpt_dt>2014-04-08T15:00:00Z</rpt_dt> <process_time_gmt>1396983306</process_time_gmt> <treenames> <tree_nm>Oak</tree_nm> <tree_nm>Birch</tree_nm> <tree_nm>Sweet Gum</tree_nm> </treenames> <total_pollen_cnt>1156</total_pollen_cnt> <stn_cmnt_cd>H</stn_cmnt_cd> <stn_cmnt>Operating Normally</stn_cmnt> <pollenobservation> <pollen_type>Tree</pollen_type> <pollen_idx>4</pollen_idx> <pollen_desc>Very High</pollen_desc> </pollenobservation> <pollenobservation> <pollen_type>Grass</pollen_type> <pollen_idx>0</pollen_idx> <pollen_desc>None</pollen_desc> </pollenobservation> <pollenobservation> <pollen_type>Weed</pollen_type> <pollen_idx>0</pollen_idx> <pollen_desc>None</pollen_desc> </pollenobservation> <pollenobservation> <pollen_type>Mold</pollen_type> <pollen_idx>9</pollen_idx> <pollen_desc>No Data</pollen_desc>	{"metadata":{ "language": "en-US", "transaction_id": "1547239301440:523427864", "version": "1", "latitude": 32.73, "longitude": -117.16, "expire_time_gmt": 1547515441, "status_code": 200 }, "pollenobservations":[{"class":"pollenobs", "loc_id":"ATL", "loc_nm":"Atlanta", "loc_st":"GA", "rpt_dt":"2014-04-08T15:00:00Z", "process_time_gmt":1396983306, "treenames":[{"tree_nm":"Oak"}, {"tree_nm":"Birch"}, {"tree_nm":"Sweet Gum"}], "total_pollen_cnt":1156, "stn_cmnt_cd":"H", "stn_cmnt":"Operating Normally", "pollenobservation":[{"pollen_type":"Tree","pollen_idx":"4","pollen_desc":"Very High"}, {"pollen_type":"Grass","pollen_idx":"0","pollen_desc":"None"}, {"pollen_type":"Weed","pollen_idx":"0","pollen_desc":"None"}, {"pollen_type":"Mold","pollen_idx":"9","pollen_desc":"No Data"}]}]}

</pollenobservation>	

Display Examples


Interactive Pollen Calendar
Reported in Atlanta, GA (Sources)
No Report Very High
Numbers represent total count for tree, grass and weed where available.
Sep 29 - Oct 25
Sun Mon Tue Wed Thu Fri Sat
29 30 67 1 24 2 14 3 28 4 18 5
6 7 16 8 11 9 35 10 35 11 17 12
13 14 10 15 20 16 3 17 5 18 4 19
20 21 2 22 4 23 1 24 18 25 3 26
Reports not available on weekends and holidays.


Interactive Pollen Calendar
Reported in Atlanta, GA (Sources)
No Report Very High
Numbers represent total count for tree, grass and weed where available.
Oct 06 - Oct 28
Sun Mon Tue Wed Thu Fri Sat
6 7 16 8 11 9 35 10 35 11 17 12
13 14 10 18 4 19
20 21 2 25 3 26
27 28 17
Mon, Oct 28, 2013
MODERATE NO ACTIVITY LOW
Tree Grass Weed
Active Trees : Cedar
Weather
64°F
54°
Mold Activity
No Report
Reports not available on weekends and holidays.

Appendix

Pollen Types

English	Spanish
Tree	Árbol
Grass	Pasto
Weed	Hierbas
Mold	Moho

Pollen Index Descriptions

Index	English	Spanish
0	None	Ninguno
1	Low	Bajo
2	Moderate	Moderado
3	High	Elevado
4	Very High	Fuerte
9	No Data	Sin datos

Station Comments

English	Spanish
No Report	Sin informe
Equipment Failure	Fallo del equipo
Reports only during weed pollen season	Informes solo durante temporada de polen
Reports Suspended	Informes suspendidos
Rain/Inclement Weather	Lluvia/Tiempo severo
Does not report year round	No informa el año entero
Report valid more than one day	Informe valido por mas de un día.
Operating Normally	Operando normalme

Tree Names

English	Spanish
Alder	Aliso
Ash	Fresno
Aspen	Álamo temblón
Birch	Abedul
Cedar	Cedro
Cottonwood	Álamo de Virginia
Cypress	Ciprés
Dogwood	Cornejo
Elm	Olmo
Hickory	Nogal
Fir	Abeto
Juniper	Enebro
Maple	Árbol de arce
Oak	Roble
Olive	Olivo
Pine	Pino
Poplar	Álamo
Redwood	Secuoya
Sweet Gum	Liquidámbar
Sycamore	Sicomoro
Plum	Ciruelo
Mulberry	Morera
Beech	Haya
Willow	Sauce
Pecan	Nogal de pecanas
No Report	Sin informe